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**TRANSMITTAL LETTER
(General - Patent Pending)**Docket No.
BKR-25102/01

In Re Application Of: Frederick Pearson

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/088,063	3/13/02	Rinehart	25006	3749	8520

Title: TREATMENT OF CARBONACEOUS MATERIAL

COMMISSIONER FOR PATENTS:

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Corrected Appeal Brief

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Serial No. 10/088,063
Corrected Appeal Brief



Attorney Docket No. BKR-25102/01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Frederick Pearson

Serial No.: 10/088,063

Group Art Unit: 3749

Filing Date: March 13, 2002

Examiner: Kenneth Rinehart

For: TREATMENT OF CARBONACEOUS MATERIAL

CORRECTED APPEAL BRIEF

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
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Sir:

Responsive to the final Office Action dated December 13, 2004, Applicant appeals the final rejection of the present application. Attached hereto is Applicant's Notice of Appeal. Applicant further avers as follows:

1.0 Real Party in Interest.

Frederick Pearson, an individual residing in Bath, United Kingdom, is the real party in interest.

2.0 Related Appeals and Interferences.

None.

3.0 Status of Claims.

Claims 1-30 and 32-36 are pending in this application. Claim 3 has been canceled.

Applicant appeals from the Patent Examiner's final rejection of all claims pending in this application, namely claims 1-30 and 32-36.

4.0 Status of Amendments.

All amendments filed in this application have been entered by the Patent Examiner.

5.0 Summary of Claimed Subject Matter.

The present invention relates to both a method and an apparatus for the treatment of carbonaceous material. The process includes the step of introducing the material into a chamber having a closure means and thereafter extracting or displacing oxygen from the chamber to provide a substantially oxygen-depleted atmosphere. Thereafter, the material is preliminarily treated by irradiating the material with electromagnetic radiation of sufficient power and for a sufficient period of time to cause substantial degradation of the carbonaceous material to an ash-like residue; see patent specification page 4, line 21 – page 5, line 9; page 20, line 15 – page 21, line 9 and Abstract.

Thereafter, oxygen and air are introduced into the chamber along with at least one combustible gas. The mixture is then ignited to cause combustion and reduce the residue from the irradiation step to a fine ash; see patent specification page 4, line 21 – page 5, line 9; page 20, line 15 – page 21, line 9 and Abstract.

The "means for" and other elements are described in the specification as follows:

housing 11 – FIG. 1; page 15, line 17

at least one chamber 12 – FIG. 1; page 15, line 17

closure means – page 15, line 20 ("lockable door")

means for extracting – nitrogen generator which displaces air; page 17, lines 22-25

means for irradiating – FIG. 1; microwave generating transducers 24; page 20, lines 12-14

means for admitting – page 20, line 25 – page 21, line 2

means for ignition – FIG. 1; ignition means 21, page 21, line 2; spark generators, page 22, line 18

The apparatus claims, namely claims 17-30 and 32-36, track the process steps with a “means for” element for each step of the method.

The “step for” and steps are described as follows:

introducing – page 15, line 18

extracting or displacing – introduce nitrogen page 20, lines 20-21, which displaces oxygen, page 17, lines 22-25

effecting a preliminary treatment – subject body to microwave treatment – page 20, lines 21-25

introducing oxygen – page 20, line 25 – page 21, line 3

igniting – spark generators which initiate combustion of remains, page 22, line 8

6.0 Grounds of Rejection to Be Reviewed on Appeal.

The Patent Examiner has rejected all claims in this application under 35 U.S.C. §112, first paragraph, as containing new matter.

7.0 Argument – The Rejection of the Claims under 35 U.S.C. §112.

Claims 1 and 17, the only two independent claims in this application, are reproduced below:

1. A process for the treatment of carbonaceous material comprising the steps of
 - i) introducing the material, into a chamber having closure means,
 - ii) extracting or displacing oxygen from the chamber so as to provide a substantially oxygen-depleted atmosphere,
 - iii) effecting a preliminary treatment of the material by irradiating with electromagnetic radiation of sufficient power and for

a sufficient period to cause substantial degradation of the carbonaceous material to an ash-like residue;

iv) **thereafter**, introducing oxygen and air and at least one combustible gas into the said chamber, and

v) igniting said at least one combustible gas whereby to cause combustion and reduce the residue from the irradiation step to a fine ash.

17. Apparatus for the treatment of carbonaceous material comprising a housing defining at least one chamber and having an opening for introducing the material into the said at least one chamber together with closure means for closing the said at least one chamber, the housing also comprising means for extracting or displacing oxygen from the said at least one chamber so as to provide a substantially oxygen-depleted atmosphere in the said at least one chamber, means for irradiating the material in the said at least one chamber with electromagnetic radiation of sufficient power and for a sufficient time so as to cause degradation of the said material to a residue, means for **thereafter** admitting oxygen or air and at least one combustible gas into the presence of said residue, and means for ignition of the said combustible gas within the said at least one chamber so as to cause substantial combustion and reduce the residue from the irradiation step to a fine ash.

Except for an obvious error in the numbering of the paragraphs in claim 1, both claims 1 and 17 are identical in form to these claims as originally filed with one exception, namely the addition of the word “thereafter” in claim 1, line 11 and the addition of the word “thereafter” in claim 17, line 11. Both of these words have been highlighted above. In each case, the word “thereafter” clarified that the carbonaceous material was first treated with the electromagnetic radiation sufficient to reduce it to an ash-like substance and, after that preliminary step, oxygen and a combustible gas were introduced into the chamber and ignited thus reducing the residue from the irradiation step to a fine ash.

The Patent Examiner has taken the position that the addition of the word “thereafter” constitutes new matter since there is no teaching in the patent specification as originally filed that the carbonaceous material is first treated with the electromagnetic radiation to reduce it to an

ash-like substance as a preliminary step and that this ash-like substance is thereafter ignited in a subsequent step. As best understood, it is the Patent Examiner's position that the sequencing of the various steps of claim 1 (and operation of the means in claim 17) has not been disclosed in the application as filed. For that reason, the addition of the word "thereafter" in both claims 1 and 17 constitutes new matter.

Applicant respectfully submits that the Patent Examiner is wrong. In this regard, see page 20, line 15 – page 21, line 9 which is reproduced in part below:

A typical process for the treatment of a coffin containing a body according to the embodiment of Figure 1 of the present invention involves the following steps. The coffin 13 is weighed prior to its introduction into a housing 11. The operator enters the details via a keypad 25 and selects a programme for the treatment process. The chamber 12 is evacuated and then purged by the introduction of nitrogen or oxygen-depleted air. Purging of the chamber 12 is continued whilst microwave irradiation of the coffin 13 is commenced. The effluent gases of the irradiation process (mostly carbon dioxide and water in the form of steam) are carried away by the purging gas. Irradiation is continued according to a calculated time or until the operator, observing through the spy holes 26 intervenes. At the end of the irradiation process a combustible gas and air or oxygen are introduced into the chamber 12 and ignited by operation of ignition means 21 provided in the floor 16 of the chamber. The effluent gases of the combustion process are carried away by the purging gas. The combustion continues according to the pre-selected programme or until such time as is determined by the operator observing through the spy holes 26. After combustion is terminated, the ash is allowed to cool under continued purging of the chamber 12 with nitrogen or oxygen-depleted air. After cooling, the ash is collected by withdrawal of the chamber floor 16 and transferred to a cremulator for final comminution before collection.

From the foregoing, it is clear that "at the end" of the irradiation process, oxygen and a combustible gas are introduced into the chamber and ignited. There is absolutely no doubt in

this portion of the patent specification that the carbonaceous material is first or preliminarily treated with the radiation and thereafter combusted.

See also the abstract of the disclosure which is reproduced in part below:

A process for the treatment of organic matter, particularly human remains, comprises the steps of preliminary microwave irradiation in an oxygen-depleted atmosphere to give a black ash-like residue, followed by combustion of the residue to give a white ash.

This portion of the abstract makes it crystal clear that the carbonaceous material is first irradiated and then combusted. This is clear since the abstract sets forth that “preliminary microwave irradiation” is “followed by combustion” of the residue.

In this regard, the Patent Examiner has taken the position that Applicant cannot rely upon the disclosure of the abstract since the abstract is not part of the patent specification. The Patent Examiner is simply wrong. See, for example, MPEP §608.01(a) and 37 CFR 1.77(b)(10) which set forth that the abstract forms a portion of the specification.

See also page 4, line 20 – page 5, line 8 which is reproduced below:

According to the present invention therefore, there is provided a process for the treatment of carbonaceous material comprising the steps of:

- i) introducing the material, into a chamber having closure means,
- ii) extracting or displacing oxygen from the chamber so as to provide a substantially oxygen-depleted atmosphere,
- iii) effecting a preliminary treatment of the material by irradiating with electromagnetic radiation of sufficient power and for a sufficient period to cause substantial degradation of the carbonaceous material to an ash-like residue;
- iv) introducing oxygen and air and at least one combustible gas into the said chamber, and
- v) igniting said at least one combustible gas whereby to cause combustion and reduce the residue from the irradiation step to a fine ash.

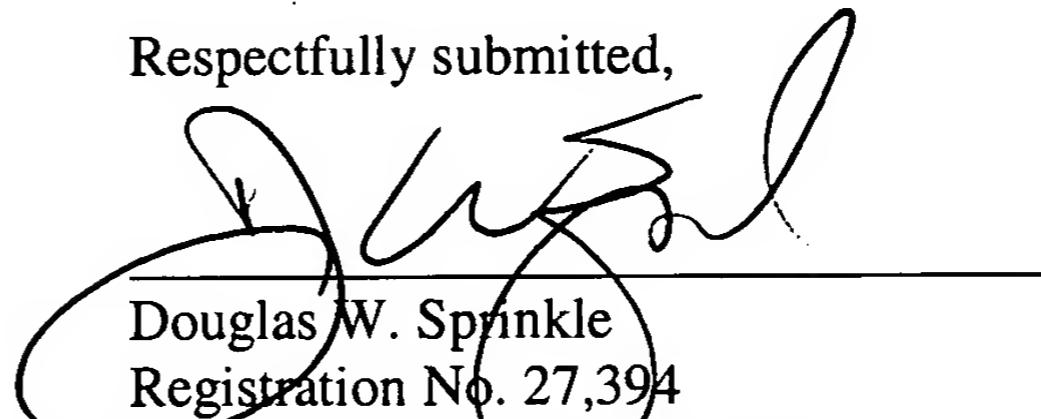
As is clear from step iii, the irradiation constitutes a “preliminary treatment” of the carbonaceous material. That means that it occurs first.

See also claim 1 as originally filed. The last step of claim 1 provides that the combustible gas is ignited “to cause combustion and reduce the residue **from the irradiation step** to a fine ash”. Since the combustion step reduces the residue **from the irradiation step**, it logically follows that the irradiation step must occur first and before the combustion step. Furthermore, Applicant is clearly entitled to rely upon disclosures in the patent claim; see MPEP §608.04.

In conclusion, the addition of the word “thereafter” to clarify the sequencing of the steps in claim 1 and the operation of the apparatus in claim 17 clearly does not constitute new matter. Rather, the sequencing of the steps and operation of the apparatus such that the irradiation step occurs first followed by combustion of the residue from the irradiation step is fully disclosed in the application as originally filed. Therefore, it does not constitute new matter.

For all the foregoing reasons, Applicant respectfully submits that the Patent Examiner’s rejection of claims 1-30 and 32-36 is in error and should be reversed. Such action is respectfully solicited.

Respectfully submitted,



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Lynn Hill
Lynn Hill

APPENDIX A

CLAIMS ON APPEAL

1. A process for the treatment of carbonaceous material comprising the steps of
 - i) introducing the material, into a chamber having closure means,
 - ii) extracting or displacing oxygen from the chamber so as to provide a substantially oxygen-depleted atmosphere,
 - iii) effecting a preliminary treatment of the material by irradiating with electromagnetic radiation of sufficient power and for a sufficient period to cause substantial degradation of the carbonaceous material to an ash-like residue;
 - iv) thereafter, introducing oxygen and air and at least one combustible gas into the said chamber, and
 - v) igniting said at least one combustible gas whereby to cause combustion and reduce the residue from the irradiation step to a fine ash.
2. The process of claim 1, in which step v) is performed by removing the residue resulting from step ii) from the said chamber to a second chamber, equipped with means for introducing oxygen or air and the said at least one combustible gas.
3. The process of Claim 1, in which ignition of the said at least one combustible gas is initiated by further irradiation with electromagnetic radiation.

4. The process of Claim 1, in which step ii) is performed by introducing an inert gas or oxygen-depleted air into the said at least one chamber whereby substantially to fill the said at least one chamber.
5. The process according to Claim 4, in which the said inert gas is nitrogen.
6. The process of Claim 1, in which step iii) is performed by irradiating the material with microwave radiation.
7. The process of Claim 1, including the step of weighing the carbonaceous material to determine the energy level and/or time for irradiation.
8. The process of Claim 1, further including the step of cooling the solid products of step v).
9. The process of Claim 1, including the further step of collecting the solid products of step v).
10. The process of Claim 1, further comprising the step of delivering the said collected products to a delivery point.
11. The process of Claim 1, including the further step of pre-heating the said material before step iii).

12. The process of Claim 1, in which the gaseous products of steps iii) and/or v) are trapped by chemical reaction or physical transformation.

13. A process for the cremation of the human or animal body comprising the introduction of a body within a coffin into a chamber having closure means, and performing thereon the process of Claim 1.

14. The process of Claim 13, in which prior to step iii) there is effected a partial opening of the coffin.

15. The process of Claim 14, in which the said partial opening is performed by mechanical means.

16. The process of Claim 14, in which the said partial opening is performed by heating said coffin and body.

17. Apparatus for the treatment of carbonaceous material comprising a housing defining at least one chamber and having an opening for introducing the material into the said at least one chamber together with closure means for closing the said at least one chamber, the housing also comprising means for extracting or displacing oxygen from the said at least one chamber so as to provide a substantially oxygen-depleted atmosphere in the said at least one chamber, means for irradiating the material in the said at least one chamber with electromagnetic

radiation of sufficient power and for a sufficient time so as to cause degradation of the said material to a residue, means for thereafter admitting oxygen or air and at least one combustible gas into the presence of said residue, and means for ignition of the said combustible gas within the said at least one chamber so as to cause substantial combustion and reduce the residue from the irradiation step to a fine ash.

18. The apparatus of claim 17, in which said means for ignition of said at least one combustible gas comprises irradiation with electromagnetic radiation.

19. The apparatus of Claim 17, further comprising means for weighing the carbonaceous material prior to, or upon introduction of the said material into the said at least one chamber.

20. The apparatus of Claim 17, further comprising means for cooling the solid products of the said combustion.

21. The apparatus of Claim 20, in which the said cooling means comprise liquid nitrogen cooling means.

22. The apparatus of Claim 17, further comprising means for collection of the said products of combustion.

23. The apparatus of Claim 22, further comprising means for the delivery of said products to a delivery point.

24. The apparatus of Claim 17, further comprising means for pre-heating the said carbonaceous material.

25. The apparatus of Claim 17, in which the said means for extracting or displacing oxygen from said at least one chamber comprise means for introducing a substantially inert gas or oxygen-depleted air whereby to substantially fill the said at least one chamber.

26. The apparatus of Claim 25, in which said inert gas is nitrogen.

27. The apparatus of Claim 17, further comprising means for trapping the gaseous products of said combustion.

28. The apparatus of Claim 17, in which the said at least one chamber is formed in a portable housing, said housing having means for connection to an external energy source.

29. The apparatus of Claim 17 adapted for the cremation of bodily remains.

30. The apparatus of Claim 29, in which the said opening allows introduction of said bodily remains within a coffin, and in which there are provided means for effecting at least partial opening of the said coffin.

32. The apparatus of Claim 29, in which said means for effecting the said at least partial opening of the coffin comprise or include means for heating the said coffin and body.
33. The apparatus of Claim 29 further comprising means for storage of said human body and/or said coffin.
34. The apparatus of Claim 33, in which said storage means comprise refrigeration means.
35. The apparatus of Claim 34, in which said refrigeration means comprise liquid nitrogen refrigeration means.
36. The apparatus of Claim 17, in which the irradiating means comprise a single transducer or array of transducers whereby electromagnetic radiation is selectively directed into said at least one chamber.

APPENDIX B

EVIDENCE

None

APPENDIX C

RELATED PROCEEDINGS

None